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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,866	07/15/2003	Stewart Frederick Bryant	50325-0807	9132

29989 7590 11/09/2009
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EXAMINER

SOL, ANTHONY M

ART UNIT	PAPER NUMBER
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2465

MAIL DATE	DELIVERY MODE
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11/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,866	Applicant(s) BRYANT ET AL.	
	Examiner ANTHONY SOL	Art Unit 2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/6/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21, 23-26 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-21, 23-26 and 28-32 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's Amendment filed 8/6/2009 is acknowledged.
- No claim has been amended, canceled, or added.
- Claims 1-21, 23-26, and 28-32 remain pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps for claims 1, 9, 10, and 18 are:

- The forwarding node (R_{n-1}) is given permission by the tunnel end point (R_n) or by manual configuration to remove the header and forward the payload to the tunnel end point (see fig. 3, step 42; also see spec., paras. 34, 37, 38).

OR

- The forwarding node is notified by a routing protocol of the identity of a neighbor node as the tunnel end point (see para. 33).

It is suggested that the applicant amend independent claims 1, 9, 10, and 18 to include at least one of the two steps detailed above. However, the exact

wordings of the steps are only suggestions and the applicant should make appropriate modifications including being mindful of antecedent basis.

Allowable Subject Matter

3. Claims 19-21, 23-26 and 28-32 are allowed.
4. Claims 1-18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
5. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of the independent claims 19, 23, 24, and 28 is the inclusion of the following limitations in all the claims which is not found in the prior art references:

constructing as a repair path around a component in the data communications network a tunnel having a tunnel end point prior to issuing a notification from the notifying node;

notifying a forwarding node of the identity of the tunnel end point; and

permitting the forwarding node to process tunneled packets to the tunnel end point by removing the header and forwarding the payload to the tunnel end point using an address directly identifying a neighboring node and without a lookup of a forwarding address.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

6. Applicant's arguments filed 8/6/2009 have been fully considered but they are not persuasive.

- Applicant argues on pg. 2 of Remarks that because the Office action makes reference to "omitted essential elements," the response assumes that the rejection of claims 1-18 was meant to be based on 35 U.S. C. 112 first paragraph.
- Initially, the Office action makes reference to omitted essential "steps," not omitted essential "elements" and based on the following section of MPEP, a claim which omits matter disclosed to be essential to the invention may be subject to rejection under 35 U.S.C. 112, para. 1, as not enabling, or under 35 U.S.C. 112, para. 2. The relevant portion of MPEP follows:

A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may also be subject to rejection under 35 U.S.C. 112, para. 1, as not enabling, or under 35 U.S.C. 112, para. 2. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976); *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976); and *In re Collier*, 397 F.2d 1003, 158 USPQ 266 (CCPA 1968). See also MPEP § 2172.01 (see MPEP, 2163, see under subsection "B. New or Amended Claims")

In any event, since the applicant responded to the rejection as if the rejection was under 112, first paragraph, the examiner will respond to the arguments as such as well as further explain the rationale for considering the omitted steps critical or essential under 112, second paragraph.

- The applicant on pg. 3 of Remarks reiterates the MPEP which states, “essential matter may include missing elements, steps (emphasis added by the examiner) or necessary structural cooperative relationships of elements **described by the applicant(s) as necessary to practice the invention** (emphasis added by the applicant).” The applicant argues on pg. 4 that the applicants have made no statements that the elements recited in claims 1-18 would be impossible to implement in the absence of elements that are not recited in claims 1-18 (Note again that the examiner referenced “essential steps,” not “essential elements”). Specifically, the applicant states that it is entirely possible to implement the elements recited in claims 1-18 without also giving permission by the tunnel end point (Rn) or by manual configuration to remove the header and forward the payload to the tunnel end point. The applicant further argues that paragraph [33] of the applicant’s specification states that “signaling of giving such permission...at the neighboring node...is optional.”
- The examiner respectfully disagrees. Paragraph [33] is reproduced below in entirety:

[0033] In the case where a tunnel is automatically configured, tunnel end point knowledge may be signaled as discussed below, but in some instances no information is signaled. In that case, all that is necessary is for the forwarding node to recognize that it is adjacent to the tunnel end point, and that it has a packet for the end point, which has been tunneled. The forwarding node can do this without any information other than that which is normally carried by the routing protocols, which will identify neighbor nodes. Although signaling may still be used to give permission for the method to be performed at the neighboring node, signaling such permission is optional, and embodiments using an automatically or manually configured tunnel may dispense with the signaling altogether in the circumstances. (emphasis added)

It is clear that paragraph [33] states that it is "necessary" for the

"forwarding node to recognize that it is adjacent to the tunnel end point."

To practice the invention, it is necessary to know the answer to the question - how does the forwarding node recognize that it is adjacent to the tunnel end point and that it should carry out the step of "removing the header"? Paragraph 33 provides the answer as follows: "The forwarding node can do this without any information other than that which is normally carried by the routing protocols" or "signaling may still be used to give permission for the method to be performed at the neighboring node." It is clear that some type of mechanism is necessary for the forwarding node to recognize that it is adjacent to the tunnel end point before implementing the step of "removing the header." Without such "recognizing mechanism," how would the forwarding node know whether to implement the steps of "removing the header and forwarding the payload." Such omission is the rationale for the rejection under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps.

As for the allegation that “signaling of giving such permission...at the neighboring node...is optional,” that statement refers to optional “signaling of ...permission” only, but does not eliminate the need for some type of recognition mechanism such as through “routing protocols” or “automatically or manually configured tunnel.” (see para. 33). The applicant's paras. 34-37 (e.g., “feature signaling protocol” of para. 34, “hello mechanism” of para. 35, “session mechanism” of para. 35, “signaling protocol” of para. 37) discusses various “recognizing mechanisms” and adds further to the notion that the step is essential. It is abundantly clear to one of ordinary skill in the art that a forwarding node cannot automatically, without some mechanism, recognize that it is the node that should remove the header before sending only the payload, which is in fact the conventional behavior of a forwarding node. As a further example, para. 31 of the applicant's specification states:

...the forwarding node Rn-1 needs to know that a neighboring node comprises a tunnel end point as well as a next hop and have the appropriate permissions to implement the method and the manner in which Rn-1 establishes this will depend upon the tunneling configuration. (see spec. para. 31)

Although it can be argued that the above excerpt is associated with an embodiment of the invention, the applicant's specification provides no disclosure which describes a method to carry out the invention without some type of “recognizing mechanism” as detailed in the 112 rejection

above. The applicant is invited to point out where in the specification such a method is described (i.e., wherein the "recognizing mechanism" is unnecessary).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY SOL whose telephone number is (571)272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2465

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. S./
Examiner, Art Unit 2465
11/10/2009

/Jayanti K. Patel/
Supervisory Patent Examiner, Art Unit 2465